

**TYRRELL COUNTY, NORTH CAROLINA**  
**Wind Energy Facilities Ordinance**

**ARTICLE I: PURPOSE, AUTHORITY, AND JURISDICTION**

**Section 1. Purpose**

The purpose of this ordinance is to provide for the regulation of the construction and operation of Wind Energy Facilities in Tyrrell County, NC in order to promote and protect the environment, the public health, safety and general welfare of the citizens of Tyrrell County, North Carolina.

**Section 2. Authority**

Tyrrell County hereby exercises its authority to adopt and enforce an ordinance regulating the construction and operation of Wind Energy Facilities under the provisions granted by North Carolina General Statute 153A-121 **General Ordinance-Making Power.**

**Section 3. Jurisdiction**

These regulations shall govern all territory lying within unincorporated areas of Tyrrell County, North Carolina, which do not currently fall under the jurisdiction of an incorporated municipality.

**Section 4. Penalty**

Any person, firm or corporation violating any of the provisions of this ordinance or failing or neglecting or refusing to comply with the same, shall be guilty of a Class 1 misdemeanor and subject to a fine not to exceed Five-hundred (\$500.00) dollars per day, per turbine and/or imprisonment not to exceed one-hundred and twenty (120) days. Each day that the provisions of this ordinance are violated shall constitute a separate offense.

**Section 5. Separability**

Should any section or provision of these regulations be held void or invalid by the courts for any reason, it shall not affect the validity of any other section or provision hereof which is not itself held void or invalid.

Whenever the provisions of any other law, ordinance or regulation impose higher standards than are required by the provisions of this ordinance, the provisions of such law, ordinance or regulation shall govern.

**Section 6. Short Title**

This ordinance shall be known as: the Wind Energy Facility Ordinance of Tyrrell County, North Carolina.

**Section 7. Effective Date**

This ordinance shall be effective from and after April 21, 2009.

ARTICLE II. DEFINITIONS

Section 1: Acronyms

For the purpose of this Ordinance, certain acronyms used herein shall be used, interpreted and defined as follows:

- 1.) dBA: decibels
- 2.) kW: Kilowatt
- 3.) MW: Megawatt

Section 2: Definitions

For the purpose of this Ordinance, certain terms and words used herein shall be used, interpreted and defined as follows:

- 1.) *Anemometer*: a device which measures the wind speed and transmits wind speed data to the controller
- 2.) *Applicant*: the person or entity filing an application for the construction and operation of a wind energy facility.
- 3.) *Environmental Assessment*: the detailed examination of the applicant's proposal and its local environmental context with an emphasis on avoiding, minimizing and mitigating adverse environmental impacts.
- 4.) *Facility Operator*: the person or entity responsible for the day-to-day operation and maintenance of the Wind Energy Facility.
- 5.) *Facility Owner*: the person or entity (s) having controlling or majority equity interest in the Wind Energy Facility, including their respective successors and assigns.
- 6.) *Non-Participating Landowner*: any landowner not under agreement with the Facility Owner or Operator.
- 7.) *Occupied Structure*: a business, residence, school, hospital, church, public library or any other building used for public gathering that is occupied or in use when the permit application is submitted.
- 8.) *Participating Landowner*: any landowner under lease, contract or other property agreement with the Facility Owner or Operator pertaining to the Wind Energy Facility.
- 9.) *Public Road*: a full passage right-of-way.
- 10.) *Shadow Flicker*: the visible flicker effect produced when rotating blades from a wind turbine cast shadows on the ground and nearby structures causing the repeating pattern of light and shadow.
- 11.) *Useful Life*: a commercial wind energy conversion facility is presumed to be at the end of its useful life if the facility or turbine generates no electricity for a period of twelve (12) months. This presumption may be rebutted by submitting to the Planning Board a plan outlining the steps and schedule for returning the commercial wind energy facility of wind turbine to service.
- 12.) *Wind Energy Facility*: an electric generating facility, whose main purpose is to generate and supply electricity, consisting of one or more wind turbines and other accessory structures and buildings, including substations, meteorological towers, electric infrastructure, transmission lines and other appurtenant structures and facilities.

- 13.) *Wind Energy Facility (Small)*: a single system designed to supplement other electricity sources as an accessory use to existing buildings or facilities, wherein the power generated is used primarily for on site consumption. A small wind energy conversion system consists of a single wind turbine, a tower and associated control or conversion electronics, which has a total rated capacity of 20 kW or less.
- 14.) *Wind Energy Facility (Medium)*: a wind energy conversion system consisting of one or more wind turbines, towers and associated control or conversion electronics, which has a total rated capacity of more than 20 kW but no greater than 100 kW.
- 15.) *Wind Energy Facility (Large)*: a wind energy conversion system consisting of one or more wind turbines, towers and associated control or conversion electronics, which has a total rated capacity of more than 100 kW but does not exceed 999 kW.
- 16.) *Wind Energy Facility (Utility Scale)*: a wind energy conversion system consisting of one or more wind turbines, towers and associated control or conversion electronics, which has a total rated capacity equal to or greater than 1 MW.
- 17.) *Wind Power*: the conversion of wind energy into another form of energy, particularly electricity.
- 18.) *Wind Turbine*: a wind energy conversion system that converts wind energy into electricity through the use of a wind turbine generator, and may include a nacelle, rotor, tower, guy wires and pad transformer.
- 19.) *Wind Turbine Height*: the distance measured from grade at the center of the tower to the highest point of the turbine rotor or tip of the turbine blade when it reaches its highest elevation.
- 20.) *Windmill*: a machine designed to convert wind energy into a more useful form by using blades to turn mechanical machinery to perform physical labor such as crushing grain or pumping water.

ARTICLE III. PROVISIONS

**Section 1: Wind Energy Facility Approval and Permit Required**

No wind energy facility, or expansion of an existing wind energy facility, shall be constructed unless a Wind Energy Facility Permit Application has been approved by the Tyrrell County Planning Board and a Wind Energy Facility Permit has been issued to the facility owner or operator by the Enforcement Officer of Tyrrell County authorizing the construction of the facility under this Ordinance. Permit application of an expansion shall be based upon the total rated capacity, including the existing facility, but excluding like-kind replacements.

Any physical modification to an existing and permitted wind energy facility that materially alters the size and/or type of wind turbines or other equipment shall require approval by the Planning Board or Tyrrell County and permit modification by the Enforcement Officer. Like-kind replacements of existing equipment shall not require additional approval.

In addition to a wind turbine facility permit, any construction shall comply with the established requirements of the following North Carolina Building Code and other established requirements of Tyrrell County, NC.

**Section 2: Wind Energy Facility Permit Application**

Prior to the construction of a new or an expansion of an existing wind turbine facility application shall be made to the Planning Board for a permit to construct the facility. The application shall be accompanied by fifteen (15) copies of the proposed plan. Such application must be received at least fifteen (15) days prior to a regularly scheduled meeting of the Planning Board of Tyrrell County, North Carolina, if the application is to be reviewed by the Planning Board at that time.

The permit application shall contain the following information:

- 1.) A narrative describing the proposed wind energy facility, including an overview of the project;
- 2.) The approximate generating capacity of the wind energy facility;
- 3.) The proposed number, representative types, height or range of heights of the wind turbines to be constructed, including their generating capacity, dimensions and respective manufacturers as well as a description of any ancillary facilities;
- 4.) Identification and location of the properties on which the proposed wind energy facility will be located including the names and addresses of adjoining property owners;
- 5.) A site plan shall be submitted and shall include the following information:
  - Date, scale and accurate North arrow;
  - Boundaries of the tract with bearings and distances;
  - Names and locations of existing property owners;
  - Proposed location of all wind turbines;
  - Property lines;
  - Setback lines;
  - Access roads and turnout locations;
  - Substations;
  - Electrical cabling from the wind energy facility to the substations;
  - Ancillary equipment;
  - All structures;
  - Transmission and distribution lines;

- 6.) Certification of compliance with applicable Federal Aviation Administration regulations;
- 7.) An environmental assessment shall be provided by the applicant for all large and utility scale facilities;
- 8.) Other relevant information as may be reasonably requested by the Tyrrell County Planning Board to ensure compliance with this ordinance;
- 9.) Decommissioning plans that describe the anticipated life of the wind energy facility, estimated decommissioning costs in current dollars, method of insuring that funds will be available for decommissioning and restoration, and the anticipated manner in which the wind energy facility will be decommissioned and the site restored;
- 10.) At the time of application for a wind energy conversion facility or wind turbine, Tyrrell County shall require the owner or operator to secure a performance bond, surety bond, letter of credit, or other form of financial assurance that is acceptable to Tyrrell County to cover the anticipated costs of decommissioning the commercial wind energy conversion facility or turbine. Small wind conversion facilities may be exempt from this provision at the discretion of the Tyrrell County Planning Board.
- 11.) Documentation of agreement between participating landowners and the facility owner/operator of the wind energy facility, and;
- 12.) Signature of the applicants and/or corporation representatives.

**Section 3: Appeals**

If the applicant wishes to appeal a decision of the Planning Board denying a Wind Energy Facility Permit or an expansion thereof, such appeal shall be filed with the Clerk to the Board of Commissioners within thirty (30) calendar days of the decision by the Planning Board. The Clerk to the Board of County Commissioners shall provide copies of the appeal to the members of the Tyrrell County Board of Commissioners, the County Administrator, the Planning Board Chairman, and the County Attorney within six (6) working days of the receipt of the appeal. The applicant’s appeal shall state specific grounds for the appeal. After such review and consideration as it deems appropriate, the Board of Commissioners shall approve or deny the Wind Energy Facility Permit.

**Section 4: Setbacks**

The following requirements shall apply to the installation of wind turbines or wind energy facilities, in Tyrrell County, NC:

Wind Energy Facility Type	Minimum Lot Size	Minimum Setback Requirements <sup>1</sup>					Maximum Height from Grade
		Occupied Buildings (subject property) <sup>2</sup>	Occupied Buildings (adjacent property) <sup>2,3</sup>	Property Lines <sup>2</sup>	Public/Private Right-of-ways <sup>2</sup>	Highway 64 <sup>2</sup>	
Small Facility	20, 000 sf	0.0	1.5	1.1	1.1	1.5	120 feet
Medium Facility	5 Acres	1.1	2.0	1.5	1.5	1.5	250 feet
Large Facility	10 Acres	1.1	2.5	1.5	1.5	1.5	250 feet
Utility Scale	25 Acres	1.1	2.5	1.5	1.5	1.5	500 feet

- 1.) Measured from the center of the wind turbine base to the property line, right-of-way, or nearest point on the foundation of an occupied structure.
- 2.) Calculated by multiplying the required setback number by the wind turbine height.
- 3.) This setback proposes to reduce noise and shadow flicker impacts to any previously existing occupied structures or adjacent properties.

Setback provision may be waived if the following conditions are met:

- 1.) Property owners may waive the setback requirements for property lines and/or occupied buildings on the participating landowner's property and/or non-participating landowner's property by signing a waiver that sets for the applicable setback provisions and the proposed changes.
- 2.) The written waiver shall notify applicable property owners of the setback requirement of this ordinance, describe how the wind energy facility is not in compliance and state that consent is granted for the wind energy facility to waive the setback as required by this ordinance.
- 3.) Any such waiver shall be signed by the applicant, the participating landowner, and/or the non-participating landowners, and shall be recorded by the Register of Deeds of Tyrrell County.

**Section 5. Noise and Shadow Flicker**

This section shall apply only to Large and Utility Scale Wind Energy Facilities. Noise and shadow flicker issues for Small and Medium Wind Energy Facilities are addressed through the use of setbacks and are subject to any existing or future noise ordinance requirements.

- 1.) Audible sound from a large or utility scale wind energy facility shall not exceed fifty-five (55) dBA, as measured at any occupied structure of a non-participating landowner.
- 2.) Shadow flicker at any occupied structure on a non-participating landowner's property caused by a large or utility scale wind energy facility located within 2500 ft of the occupied structure shall not exceed thirty (30) hours per year.
- 3.) Noise and or shadow flicker provisions may be waived if the following conditions are met:
  - a. Property owners may waive the noise and/or shadow flicker provisions of this ordinance by signing a waiver of their rights.
  - b. The written waiver shall notify applicable property owners of the noise and/or shadow flicker limits required by this ordinance, describe how the wind energy facility is not in compliance, and state that consent is granted for the wind energy facility to waive noise and/or shadow flicker limits as required by this ordinance.
  - c. Any such waiver shall be signed by the applicant and the non-participating landowners, and recorded by the Register of Deeds of Tyrrell County.

**Section 6. Installation and Design**

The design and installation standards of a wind energy facility shall be in compliance with the following standards:

- 1.) The installation and design of the wind energy facility shall conform to all applicable industrial standards, including those of the American National Standards Institute.
- 2.) All structural, electrical and mechanical components of the wind energy facility shall conform to relevant and applicable local, state, and federal codes.
- 3.) Any onsite collector system, transformers and power lines shall, to the maximum extent possible, be placed underground.
- 4.) The visual appearance of wind energy facilities shall at a minimum:
  - a. Be a non-obtrusive color; color shall be approved by the Planning Board.

- b. Not be artificially lighted, except to the extent required by the Federal Aviation Administration (FAA) or other applicable authority that regulates air safety; and,
- c. Not display advertising (including flags, streamers or decorative items). This provision shall not be construed to mean signs or stamped plaques for the purpose of identification of the turbine, identification of the turbine manufacturer, facility and owner and operator. Size of the stamped plaque or sign shall be approved by the Planning Board.

**Section 7. Decommission or Abandonment**

The following standards shall apply in the case of wind energy facility decommission or abandonment:

- 1.) The owner of the wind energy facility shall complete decommission of the facility within six (6) months if no electricity is generated for a continuous twelve (12) month period.
- 2.) Decommissioning shall include the removal of all wind turbines, buildings, cabling, electrical components, roads, and any other associated facilities down to 36 inches below grade.
- 3.) Disturbed earth shall be graded and re-seeded, unless the landowner requests in writing that the access roads or other land surface areas not be restored.
- 4.) If the commercial wind energy conversion facility owner or operator does not complete decommissioning, Tyrrell County may take such action as may be necessary to complete decommissioning, including requiring forfeiture of the bond.

This ordinance shall be in effect and after :April 21, 2009.

*Thomas W. Spivey*

Chairman, Tyrrell County Board of Commissioners  
Attest:

4/21/09  
Date

*Penny Jones*

Penny Jones, Clerk to the Board of Commissioners

4/21/09  
Date